

## ABUNDANCE OF SEVERAL SPECIES OF COLEOPTERA IN BRITISH COLUMBIA

By S. D. HICKS<sup>1</sup>

During June and July, 1953, I collected beetles at Mission City and other localities in the lower Fraser Valley. This section of British Columbia was having the wettest season in 50 years, especially in the first two weeks of June. June and July of 1952 had been extremely dry. These facts may have some bearing on the striking abundance of several species of beetles.

The first two weeks of June at Mission City were so extremely wet that collecting was limited almost entirely to water beetles and beetles under cover of bark and debris. The European ground beetle *Pterostichus* (*Omaseus*) *melanarius* (Ill.) is well established along the lower Fraser Valley. It has been known in the west since 1927 and has been reported from northwestern Oregon, eastern and western Washington, and the Victoria and Vancouver districts of British Columbia (Brown, 1950). It is evidently spreading in that province, as it has recently in the east. It is said to be abundant and very widely distributed in Europe and Siberia (e.g., Jeannel, 1942, pp. 784-785).

In early June, a snout beetle, *Rhynchites bicolor wickhami* Ckll., occurred in thousands on the tender crown leaves of the thimbleberry, *Rubus pariflorus* Nutt., which is very abundant in the lower Fraser Valley. The feeding holes of the adult were very noticeable in the unfolding tops of this broad-leafed species of *Rubus*. The western form has a black head and beak. The common eastern form, "the rose curculio of the Transition Zone" (Leonard, 1928), has a red head and a black beak. From 1937 to 1941, I noticed it as a pest of rose bushes in gardens throughout the Niagara Peninsula, but during 1942 I was unable to find it (Hicks, 1942, p. 244).

Possibly the most abundant beetle of the lower Fraser Valley is the alder flea beetle, *Haltica ambiens ambiens* Lec. The alder tree, *Alnus rubra* Bong., attains considerable size, and there are numerous seedlings everywhere. The feeding of the larvae was strikingly evident by the holes in the leaves. Another species of flea beetle, *Haltica tombacina tombacina* Mann., occurred commonly everywhere on fireweed, *Epilobium angustifolium* L. Near Harrison Mills an estimated population of two hundred beetles was observed on one plant.

At a large peat bog near Pitt Meadows in the lower Fraser Valley, a remarkable number of coccinellids was observed. There were few species, those represented in abundance being *Coccinella trifasciata*

<sup>1</sup>Systematic Entomology Unit, Entomology Division, Canada Department of Agriculture, Ottawa.

*subversa* Lec., *Coccinella californica* Mann., and *Cycloneda munda* (Say) The vegetation in the rows of the bog where the peat is uncut is a dense mat of many kinds of plants with a species of fern predominating; there were thousands of adult and pupal coccinellids on the plant leaves. There was also a small click beetle, *Megapenthes caprella caprella* Lec., which could be seen anywhere on plant foliage, and by sweeping with a net one could easily have obtained hundreds in a short time. However, this species was not nearly so abundant as it was along Diamond Head Trail, which leads into Garibaldi Park from Squamish. From 2200 ft. to 3300 ft. on the sides of the trail it was possible to collect thousands of specimens with little effort from the flower heads of pearly everlasting, *Anaphalis margaritacea* (L.) C. B. Clarke, and the occasional shrub of ocean spray, *Holodiscus discolor* (Pursh) Maxim.

Perhaps most impressive was the abundance of *Cantharis fulva* Scop. This European species had been known in America only from Abbotsford, B. C., seven miles south of Mission City, where it was found abundantly in 1948 (Brown, 1950). The beetles were observed at Miller's Slough, a short distance from MacGillivray Creek, the nearest post office being Chilliwack. As the name suggests, the area is low-lying and marshy, with large sandy areas, and there is a noticeable predominance of thistles, giant poplar trees and their seedlings, willows, and alders. Thousands of these beetles were scattered everywhere on this vegetation, resting on the leaves, mating, and flying. At one particular spot there was a large group of willows, and dozens of beetles were flying in and out of the branches at a height of 15 feet. Tiger beetles were common on all the sandy areas, but not as abundant as on a large, sandy, marshy area a few hundred yards to the east. I have never seen so many beetles running over a ground at one time. The species represented were *Cicindela oregona* Lec. and *Cicindela repanda* Dej.

The total number of species collected during the summer was disappointingly small. Having collected in other Canadian regions, I would have expected a much more diversified coleopterous fauna in view of the varied flora of the Fraser Valley.

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